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Photometric observations of LO peg in 2014-2015

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Abstract

We performed new observations of an ultra-fast rotator of the spectral class K - the LO Peg star - in SAO RAS in 2014 and in Zvenigorod Observatory of INASAN in 2015. The light curves were used to build the maps of temperature inhomogeneities on the LO Peg surface in order to determine the longitudes corresponding to the location of active regions. The obtained measurements suggest the ongoing evolution of movements of active regions and probably the cyclic character of such movements. According to our estimations, the area of the star surface covered with spots decreases and by now it reached 14% of the total visible area of its surface. New observations of the star in V filter allowed us to specify LO Peg long-term variability cycles. Based on spectropolarimetric observations of LO Peg the null result for measurements of mean longitudinal component of magnetic field is obtained.

Keywords

Stars: activity, Stars: magnetic field, Starspots